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# ACCOUNTING EDUCATION AND STRENGTHENING OF THE PROFESSION: COMPARATIVE STUDY OF CURRICULA FOR ACCOUNTANTS AND AUDITORS IN AFRICA, ASIA, EUROPE, LATIN AMERICA AND NORTH AMERICA, INCLUDING PRE-QUALIFICATION AND CONTINUING EDUCATION PROGRAMMES IN PUBLIC AND PRIVATE INSTITUTIONS, AND EXAMINATION AND CERTIFICATION PROGRAMMES; AND REVIEW OF TRAINING PROGRAMMES IN AFRICA AND CENTRAL AND EASTERN EUROPE

## Regional review of accounting and auditing education and training in Africa

## Report of the Secretary-General

SUMMARY

The present report summarizes the responses to a questionnaire on the status of accounting education and training received from 24 African countries. It confirms the earlier findings presented in Accountancy Development in Africa: Challenge of the 1990s 1/ with regard to the serious deficiencies in both the quality and number of accountants in Africa. The reasons for those deficiencies become readily apparent when one examines the educational environment. Without the proper infrastructure for the education and training of accountants, it will be difficult to achieve accountability in the public sector at any time in the near future.

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## INTRODUCTION

1. As part of the preparation for the eleventh session of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR), a questionnaire was designed and circulated to collect information on the state of accounting education and training at the national level. The objective of the survey was to determine the state or adequacy of accounting education world wide so that the Group could make recommendations for improvements in accounting education and for technical assistance projects to promote those improvements. The present report contains a summary of the 29 replies to the questionnaire that were received from African countries. The replies were not verified for their accuracy. Information will be corrected as necessary during the eleventh session and a revised version of the report will be published in the International Accounting and Reporting Issues: 1993 Review.

2. Some details about the questionnaire and its circulation are necessary in order to properly understand and interpret the country replies. The questionnaire was circulated to all Governments by the Secretary-General through a note verbale. It was also sent to a number of leading academics in accounting as well as to the heads of professional bodies. The questionnaire was divided into three parts:

Part I. Profile of education

Part II. Assessment of the role of accounting education

Part III. Future direction of accounting education

3. The first part contained questions of fact, that is, questions on the actual situation regarding the certification process, educational requirements and educational infrastructure. The second and third parts asked a series of questions on the role and future direction of accounting education, which were therefore subjective in nature and could have more than one answer depending on who replied. Consequently, it is advisable to keep in mind the subjective nature of those questions when reading the country replies. Lastly, it is important to state that the country replies in section II are just that - country replies - and not expressions of the opinion of the United Nations.

## I. GENERAL CONCLUSIONS BASED ON NATIONAL RESPONSES

4. Before each country's reply is described in detail, an analysis of the various groups of questions will be presented in order to obtain an overview of the situation. The findings in this report are consistent with the earlier findings presented in Accountancy Development in Africa: Challenge of the 1990's. 1/

5. It appears that many African countries have difficulty providing the training necessary to produce fully qualified accountants. Accounting certificates or licences were awarded by professional or governmental institutions in only 13 out of 24 African countries studied (see table 1). In the remaining countries, educational institutes granted diplomas to accounting technicians and accountants. In those cases, many accountants sought a foreign certification (see table 2). Most of the instructors taught full time but in only five countries did more than half the faculty have a professional accountant's certification. In every country, levels of remuneration of instructors were below those of accountants in business. In 12 countries the remuneration was less than half that earned in the private sector. Salaries in the public sector were even lower in many cases (see table 3).

6. While most accounting curricula included financial accounting, cost accounting and auditing, government accounting and international accounting were seldom taught. Reliance on the lecture method was predominant and the case method seldom used owing to a lack of training materials (see table 4). Most of the instruction was given in the classroom rather than by correspondence and was usually subsidized by the Government (see table 2).

7. The main deficiencies in accounting education cited in almost all instances were the lack of trained faculty, and of appropriate materials (see table 5). Such an environment seriously affected the quality of accountants in 11 out of the 24 countries. These conditions made it difficult for accounting education to contribute to accountability in the public sector in almost all countries (see table 6).

## II. NATIONAL RESPONSES

### A. Algeria

#### 1. Certification of accountants

8. In Algeria, as in many French-speaking countries in Africa, it is not possible to obtain a designation as a fully qualified accountant (that is, as an expert comptable) unless one goes abroad. However, it is possible to earn a number of lesser designations such as:

Certificat d'aptitude professionelle (CAP)

Brevet d'études professionelle (BEP)

Baccalauréat (BAC)

Diplôme préparatoire aux études comptables et financières (DPECF)

Diplôme d'études comptables et financières (DECF)

Maîtrise de sciences et techniques comptables et financières (MSTCF)

Diplôme d'études supérieures comptables et financières (DESCF)

9. The first four designations would enable the holder to work as a bookkeeper or accounting technician. The last two are university degrees and would enable the holder to perform many of the functions of an accountant within an enterprise but would not qualify him or her to be a public accountant or an auditor. In order to qualify as an expert comptable, the DESCF holder would have to undergo three years of supervised practical experience (with at least one or two years spent abroad) followed by a successful written and oral examination.

### 2. Content of accounting education

10. Courses concentrate on financial accounting, cost accounting and auditing and are usually taught using the lecture method. The Government gives a subsidy of 75 per cent to education.

### 3. Main deficiencies in accounting education

11. Algeria lacks trained faculty, modern curricula and textbooks that have a practical orientation. As a result there is an insufficient number of accountants and their quality is poor. This contributes to a lack of accountability in both the public and private sectors.

## B. Benin

### 1. Certification of accountants

12. Accounting diplomas as described above are given by the Institute of National Economy and the National School of Administration. For those studying to be accounting technicians, three years secondary education are required; for those studying to be accountants between three and six years at a college are required.

### 2. Main providers of education

13. The main educational providers are the Lycée technique Coulibaly, Collège Technique de Cotolou (CPC) Porto-Novo, CPC Ouidah and the National School of Administration. All those with a professional accounting certification were educated abroad.

### 3. Teaching faculty and programmes

14. Approximately 65 per cent of the instructors teach full time but only 2 per cent have a professional accounting certification. Instructors earn half of what is earned by accountants in the public or private sector. About 40 per cent of the courses are devoted to accounting and the lecture method is largely used. The Government fully subsidizes accounting education.

### 4. Main deficiencies in accounting education

15. The main deficiencies are the lack of appropriate training materials and curriculum, and large classes. Therefore, the quality of accounting graduates is poor. While the regulation of accounting at the enterprise level is promoting the harmonization of practices, the reliability of accounting information depends directly on the competence of accountants and there is much to do to improve their level of skills.

## C. Botswana

### 1. Certification of accountants

16. The accounting licence is conferred by the Botswana Institute of Accountants, based on written examinations given jointly with the Chartered Association of Certified Accountants (ACCA). Three years of supervised experience are also required following international practice.

### 2. Main providers of education

17. The main providers of accounting education are the Botswana Centre for Accounting Studies and the Debswana Accountancy College. The Botswana Centre for Accounting Studies was established in 1990 as a Ministry of Finance and Development Planning initiative. Its objective is to meet the large demand in Botswana for fully qualified accountants. Both institutions require "O" levels for those students studying to be accounting technicians and "A" levels for those studying to be fully qualified accountants. All courses are taught in classrooms. No correspondence courses are accepted.

### 3. Teaching faculty and programmes

18. Almost all the faculty teaches on a full-time basis and all have professional accounting certifications. The ratio for accountants of salaries in the academic world to those in business is 90 per cent. Approximately one third of the typical programme leading to a degree in accounting is composed of accounting courses; another third comprises courses in business and management and the final third, liberal arts. The full range of accounting and business courses are taught and a variety of teaching methods are used.

### 4. Main deficiencies in accounting education

19. The main deficiencies are the lack of well-prepared students at entry level, of on-the-job training and of physical facilities, particularly computers. Approximately half of the education is subsidized by the Government. The main problem affecting national development is the lack of

supply of accountants. The Botswana Centre for Accounting Studies is still in its infancy but responding actively to the growing need for accountants in the economy.

## D. Burkina Faso

### 1. Certification of accountants

20. Accounting diplomas are awarded by secondary schools, national schools of finance, universities and the National Institute of Economic and Accounting Techniques (INTEC) (France). Written examinations that are both comprehensive in nature and course-specific are given. For a lower-level diploma, it is necessary to fulfil a three-to-four month practical experience requirement in an enterprise.

### 2. Main educational providers and programmes

21. The main providers of accounting education are Centre d'études de l'Immaculée Conception, Lycée Promotion, Lycée Leo-Lagrange, University Institute of Technology and INTEC.

22. About 45 per cent of the instructors teach full time. None of them have a professional accounting certificate. They earn about 15 per cent of what is earned by accountants in the private sector. Accounting courses constitute about 75 per cent of the curricula. Seventy per cent of the education is financed by the Government.

### 3. Main deficiencies in accounting education

23. Main deficiencies in accounting education are the lack of well-qualified students, of appropriate curricula and of trained faculty. This affects the quantity and quality of accountants, and the development of the accounting profession, and contributes to the lack of accountability in the public and private sectors.

## E. Central African Republic

### 1. Certification of accountants

24. Accounting diplomas are given by lycées and the National School of Administration. The diplomas, given after passing general written examinations, are the certificat d'aptitude professionelle (CAP), the brevet d'études professionelles (BEP) and the brevet de technicien supérieur (BTS) There is a two-month practical experience requirement for BEP and BTS.

### 2. Main providers of education

25. The main providers of accounting education are the Lycée technique de Bangui, the National School of Administration, the Chamber of Commerce and the Institut universitaire de gestion (University Institute of Management). The Government provides a subsidy of 15 per cent to accounting education.

### 3. Teaching faculty and programmes

26. Only 25 per cent of the faculty are full-time instructors and only 25 per cent have a professional accounting certification. Accounting courses constitute about 60 per cent of the curriculum. Lectures are the predominant method of teaching.

### 4. Main deficiencies in accounting education

27. The main deficiencies are lack of trained faculty, inappropriate curricula and textbooks, and lack of physical facilities, particularly computers. Those deficiencies contribute to an inadequate supply of accountants, the lack of an independent profession and the lack of accountability in the public sector.

## F. Egypt

### 1. Certification of accountants

28. Accountants are certified by the Syndicate of Commerce along with the Record of Accountants in the Ministry of Finance. No written examination is given but 10 years experience in auditing and accounting is required as well as a university diploma in commerce.

### 2. Main providers of education

29. Accounting education is provided by the faculties of commerce at major institutions such as Cairo University, Ein Shams University, Asyoot University, Alexandria University, Canal University, Zakazik University, Mansoura University, Mounofia University and Menia University. Accounting education is fully financed by the Government.

### 3. Teaching faculty and programmes

30. All university faculty are full-time instructors and have higher-level degrees, both a Doctor of Philosophy degree (Ph.D.) and a professional accounting certification. While all accountants start out at the same salary level, academic accountants earn more over time than accountants in the public

and private sectors. Accounting courses constitute about half of the curriculum and the lecture method predominates.

### 4. Main deficiencies

31. No serious deficiencies were reported in accounting education. The supply and skill level of accountants are adequate, the accounting profession is independent and accounting education contributes to accountability in the public and private sectors, which contributes in turn to the development process within the country.

## G. Gabon

### 1. Certification of accountants

32. Accounting diplomas are given by the School of Commerce of Port-Gentil and the National Institute of Management Science at the University of Omar Bongo. There is no process by which one can become a fully qualified accountant or an expert comptable within the country.

### 2. Main providers of education

33. The main provider of accounting education is the National Institute of Management Science at the University of Omar Bongo. It awards a Brevet Technicien Supérieur (BTS) which takes three years to acquire. A number of technical lycées and the Chamber of Commerce train accounting technicians. Ninety per cent of the education is subsidized by the Government.

### 3. Teaching faculty and programmes

34. Ninety-five per cent of the teaching faculty are full-time instructors but only 3 per cent have professional accounting certificates. They earn less than their counterparts in the public and private sectors. Accounting courses constitute 40 per cent of the curriculum and are taught using the lecture method.

### 4. Main deficiencies

35. The main deficiencies in accounting education are the lack of appropriate training materials, and of physical facilities particularly computers, and large class-size. This limits the supply of accountants, affects the independence of the profession and contributes to the lack of accountability in the public sector. As stated in the questionnaire, one of the chief characteristics of the situation in Gabon is the poverty of human resources in the areas of accounting and management. This state of affairs has produced

catastrophic results in the public sector in general and in the parastatal sector in particular. The development of accounting education would permit the country to train the managers necessary for state enterprises that could contribute to the development of Gabon. Moreover, the respondents are convinced that no programme of economic correction and no development action can benefit a fragmented economy characterized by the lack of a solid and well-tested accounting infrastructure.

## H. Kenya

### 1. Certification of accountants

36. The Registration of Accountants Board confers an accounting licence. It is given based on comprehensive written examinations. Work experience is not mandatory.

### 2. Main providers of education

37. The main providers of education are the Strathmore School of Accountancy, the Kenyan College of Accountancy, the School of Professional Studies, Harambe Technical College and a number of polytechnics including Kenya Polytechnic and Mombasa Polytechnic. Correspondence courses can be substituted for structured classes at universities or institutes. Accounting education is not subsidized by the Government.

### 3. Teaching faculty and programmes

38. Sixty per cent of the faculty teach full time and 30 per cent have professional accounting certifications. Accounting courses constitute 40 per cent of the curriculum and the lecture method predominates.

### 4. Main deficiencies

39. The main deficiencies are the lack of computers, of physical facilities and of trained faculty, and the large class-size. This contributes to the lack of accountants and of accountability in the public sector. In fact the public sector does not fully appreciate the necessity for professional accounting services.

## I. Lesotho

### 1. Certification of accountants

40. The accounting licence is given by the Lesotho Institute of Accountants. It is based on a comprehensive written examination. Five years of practice experience are required for chartered accountants.

### 2. Main providers of education

41. The main providers of education are the Lesotho Institute of Accountants, the Institute of Development Management, the Lesotho Public Administration and the Centre for Accounting Studies. There is no government subsidy for accounting education.

### 3. Teaching faculty and programmes

42. Eighty-five per cent of the instructors have professional accounting certifications. Accounting courses constitute 60 per cent of the curriculum. Both the lecture and tutorial methods are used.

### 4. Main deficiencies

43. The main deficiencies are the lack of well-prepared students, of trained faculty, of relevant teaching material, and of computers. The number and quality of accountants are inadequate and this hinders the development of an independent accounting profession. Accounting education contributes little to accountability in either the public or the private sector.

## J. Libyan Arab Jamahiriya

### 1. Certification of accountants

44. The accounting and auditing certification is given by the Certified Public Accountants and Auditors Union. It is based on a comprehensive written examination. There is a five years' experience requirement.

### 2. Main providers of education

45. The main providers of education are the faculties of commerce and the high finance institutes of Tripoli, Bengazi and Garian. The Government subsidizes 40 per cent of accounting education.

### 3. Teaching faculty and programmes

46. All faculty are full time. Thirty per cent have Ph.D.s Accountants in the public and private sectors earn more than academics. Accounting courses constitute 60 per cent of the curriculum and the lecture method is used predominantly.

### 4. Main deficiencies

47. The main deficiencies are inadequate curricula, the lack of relevant teaching materials, and of computers, and large class-size. Thus, the supply of accountants is inadequate, and they are lacking in quality, and this contributes to the lack of accountability in both the public and private sectors.

## K. Madagascar

### 1. Certification of accountants

48. The National Institute of Accounting Science and Administration of Enterprises (INSCAE), the University of Madagascar and the Higher Institute of Technology offer an accounting certification. It is based on a comprehensive written examination. Three years' experience is needed for the degree. Commercial lycées give diplomas to accounting technicians.

### 2. Main providers of education and their programmes

49. The main providers are listed above. Eighty per cent of their instructors are full time but only 5 per cent have professional accounting certifications. Sixty-five per cent of the courses are in the area of accounting and the tutorial method predominates. The Government provides a subsidy of 80 per cent.

### 3. Main deficiencies

50. The main deficiencies are the lack of trained faculty, and of appropriate training materials, as well as of physical infrastructure and computers. This contributes to the lack of accountability in the public sector.

## L. Mali

### 1. Certification of accountants

51. The Ministry of Education gives certifications to accounting technicians and accountants but those certifications do not entitle them to become an expert comptable. Such a status can only be achieved abroad. There is an experience requirement for those who receive the Ministry of Education certification.

### 2. Main providers of education

52. The main providers of education are the National School of Administration and the schools of higher studies. The Government fully subsidizes accounting education.

### 3. Teaching faculty and programme

53. Only 10 per cent of the teaching faculty are full time and only 1 per cent have professional accounting certifications. They earn considerably less than accountants in the private sector. The accounting courses focus on financial and cost accounting and the lecture method is used.

### 4. Main deficiencies

54. The main deficiencies are the lack of trained faculty, of appropriate training materials, and of qualified students. This results in an insufficient number of accountants, inadequate quality, and lack of an independent accounting profession, and contributes to the lack of accountability in the public and private sectors.

## M. Mauritania

### 1. Certification of accountants

55. There is no certification of accountants in Mauritania. Certification is obtained abroad from the Ordre des experts comptables (France) which requires written and oral examinations and three years' practice experience.

### 2. Main providers of education

56. Accounting education for technicians is given by commercial lycées and institutes including the School for National Administration. Eighty per cent of the certified accountants were educated abroad and 20 per cent obtained certifications by correspondence. The Government provides a subsidy of 50 per cent to education.

### 3. Teaching faculty and programmes

57. Eighty per cent of the teaching faculty at the commercial lycées and institutes are full-time instructors, about 7 per cent have a Ph.D. degree and 3 per cent have a professional accounting certification. Accountants in education earn 56 per cent of what is earned by those in business. Accounting courses constitute over 50 per cent of the courses taught as part of the degree programme in the lycées and institutes. The tutorial method is used more frequently than the lecture method or case-studies.

### 4. Main deficiencies

58. The main deficiencies are the lack of trained faculty, inappropriate curricula and materials and the lack of computers. This results in an

insufficient number of accountants and a profession that lacks independence, and contributes to the lack of accountability in the public sector.

## N. Mauritius

### 1. Certification of accountants

59. A diploma (after two years of study) and a Bachelor of Science (B.Sc.) degree (after four years of study) in accounting are awarded by the University of Mauritius. Since there is no certification process for accountants in Mauritius, certifications are obtained from overseas professional accounting bodies such as the Chartered Association of Certified Accountants (ACCA) and Chartered Institute of Management Accountants (CIMA). Correspondence courses can be substituted for structured classes in the ACCA/CIMA programmes. The Government provides no subsidies for accounting education.

### 2. Main deficiencies

60. The main deficiencies are the lack of well-prepared students at entry level, of trained faculty, of relevant teaching materials and of physical facilities. This results in the inadequate preparation of accountants, and a profession that lacks independence, and contributes to a lack of accountability in both the public and the private sector.

## O. Morocco

### 1. Certification of accountants

61. The accounting certification is given by the Higher Institute of Commerce and Administration of Enterprises (ISCAE) based on written examinations in a number of fields. There is an experience requirement of three years.

### 2. Main providers of education

62. The main providers of education are the Higher Institute of Commerce and Administration of Enterprises, the Ministry of Finance and various schools. Ninety per cent of the education is subsidized by the Government.

### 3. Teaching faculty and programmes

63. Seventy per cent of the faculty are full time. Sixty per cent have a professional accounting certification. They earn more than government accountants but less than accountants in the private sector. Half the curriculum consists of accounting courses and 40 per cent of the instruction is presented by the lecture method.

### 4. Main deficiencies

64. The main deficiencies are the lack of qualified students, of trained faculty, and of appropriate curriculum and materials. This results in an inadequate supply of accountants, deficiencies in their skills, and the lack of an independent profession, and contributes to the lack of accountability in the public and the private sector.

## P. Nigeria

### 1. Certification of accountants

65. The Institute of Chartered Accountants of Nigeria (ICAN) and the University give an accounting licence and diploma respectively. The licence is based on written examinations given on a course-by-course basis. There is also a 30 months' practical experience requirement. About 70 per cent of the fully qualified accountants were trained in Nigeria.

### 2. Main providers of education and their programmes

66. At least seven universities provide training in accounting. Ninety per cent of their instructors teach full time. Sixty-five per cent have professional accounting certifications. They earn 40 per cent of what is earned by accountants in the private sector. Sixty per cent of the courses are accounting and 40 per cent business and management. The lecture method is the most widely used form of instruction. There are no subsidies for accounting education.

### 3. Main deficiencies

67. The main deficiencies are the lack of relevant training materials, of computers and of appropriate curricula, and large classes.

## Q. Rwanda

### 1. Certification of accountants

68. There exists a draft law through which an Ordre des experts comptables would be set up. At the present time, accounting can be studied at the National University of Rwanda and the Institute of Public Finance. Through the new law graduates of the above institutions who had a degree in accounting or management and five years' experience would be certified.

### 2. Main providers of education and their programmes

69. The main providers of accounting education are the National University and the Institute of Public Finance. Seventy per cent of their faculty work full time. Ten per cent have a professional accounting certification. They earn 50 per cent of what is earned by an accountant in the private sector. Half the courses in the degree programme are accounting courses and the lecture method is used predominantly. The Government provides a subsidy of 80 per cent for accounting education.

### 3. Main deficiencies

70. The main deficiencies are the lack of a trained faculty, of appropriate training materials and of computers. This affects the quality of accountants.

## R. Senegal

### 1. Certification of accountants

71. Accounting diplomas are given by the National School of Administration (ENAM), the National School of Higher Technology (ENSUT) and the Centre for African Management Studies (CESAG). Certification is obtained abroad from the Ordre des experts comptables (France).

### 2. Main providers of education and their programmes

72. ENSUT and CESAG prepare accountants for the private sector and ENAM prepares accountants for the public sector. To progress beyond the level of accounting technician one would need a higher-level degree (maîtrise) and three years' experience. Examinations are given on a course-by-course basis. Eighty per cent of the faculty teach full time. Sixty per cent have a professional accounting certification. Instructors earn about 80 per cent of what is earned by accountants in the private sector. Accounting courses constitute half the courses in the degree programme. The lecture method is used half the time. The Government gives an 80 per cent subsidy.

### 3. Main deficiencies

73. The main deficiencies are the lack of trained faculty and of appropriate materials. This results in the lack of an independent profession and contributes to the lack of accountability in the public and private sectors.

## S. South Africa

### 1. Certification of accountants

74. The South African Institute of Chartered Accountants gives a designation of chartered accountant based on a comprehensive written examination. There is also a three years' experience requirement. The Public Accountants and Auditors Board awards a licence to practice as a public accountant and auditor. Almost all accountants receive their training in South Africa.

### 2. Main providers of education and their programmes

75. The main providers of education are the universities. Ninety per cent of the instructors are full time and 75 per cent have a professional accounting certification. Salaries are less than half of those in the private sector. Accounting courses constitute about 70 per cent of the curriculum and the lecture method predominates.

### 3. Main deficiencies

76. The main deficiencies are large classes, and lack of well-prepared students and of trained faculty. The supply of black accountants is insufficient, and these deficiencies contribute to the lack of accountability in the public sector.

## T. Swaziland

### 1. Certification of accountants

77. Certification is given by the Swaziland Institute of Accountants. It is based on a number of specific written examinations. There is also an experience requirement. Five per cent of the accountants are trained in Swaziland.

### 2. Main providers of education and their programmes

78. The main providers of education are the University of Swaziland, the Swaziland Institute of Management and Public Administration, and the Swaziland College of Technology. Ninety per cent of the instructors teach full time. None have a professional accounting certification. They earn 34 per cent of what is earned by accountants in the private sector. Accounting courses constitute 55 per cent of the degree programme. The lecture method is used almost exclusively. The Government gives a 70 per cent subsidy to education.

### 3. Main deficiencies

79. The main deficiencies are the lack of well-prepared students at the entry level, of trained faculty and of appropriate training materials. This results in an inadequate supply of accountants and in their inadequate preparation, and contributes to a lack of accountability in the public sector.

## U. Tunisia

### 1. Certification of accountants

80. The Institute of Higher Commercial Studies, the Institute of Higher Management, the Institute of Higher Accounting and the Faculty of Economic, Sciences and Management confer an accounting diploma as expert comptable. It is based on seven years' training after the baccalaureate, a number of specific written examinations and a three years' experience requirement.

### 2. Main providers of education and their programmes

81. The main providers are listed above. Seventy per cent of the instructors teach full time. All have a higher degree. They earn 58 per cent of what is earned by accountants in the private sector. Accounting courses constitute 55 per cent of the degree programme and the lecture method predominates. The Government fully subsidizes education.

### 3. Main deficiencies

82. The main deficiencies are large classes and a lack of computers.

## V. Uganda

### 1. Certification of accountants

83. In Uganda, it is possible to receive a diploma or certificate only at the level of accounting technician. However, it is possible to receive a professional accounting certificate from abroad through the Chartered Association of Certified Accountants or the Chartered Institute of Management Accountants. There is no national professional body to examine or award such a certificate. However, the Register of Companies does issue certificates upon presentation of an examination certificate, diploma or degree in accounting and evidence that one has worked in a professional firm.

### 2. Main providers of education

84. The main providers of accounting education are the National College of Business Studies, the Uganda Management Institute and various commercial colleges. Only 40 per cent of the faculty teach full time and only 20 per cent have a professional accounting certification. Instructors earn 3 per cent of what is earned by accountants in the private sector. Accounting courses constitute 45 per cent of the curriculum. One hundred per cent of the fully qualified accountants were trained abroad.

### 3. Main deficiencies

85. The main deficiencies are the lack of a funded national institute of accountants and of training facilities for professional accountants at the university level. Without such institutions, the supply and quality of accountants remain deficient, and the profession is not an independent one. These conditions contribute to the lack of accountability in the public and private sectors.

## W. Zambia

### 1. Certification of accountants

86. The Department of Technical Education and Vocational Training of the Ministry of Science trains about 50 persons per year in accounting and gives a certificate attesting the status of recognized accountant. Full members of the Zambia Institute of Certified Accountants are recognized accountants. The certificate is awarded based on a comprehensive written examination of ACCA. There is also an experience requirement.

### 2. Main providers of education and their programmes

87. A number of colleges and institutes teach accounting, including the Zambia Centre for Accountancy Studies. While most of the instructors are full time, almost none have higher-level degrees. The lecture method is used. Almost all the fully qualified accountants were trained abroad.

### 3. Main deficiencies

88. There is an unresolved dispute between the Zambia Institute of Certified Accountants and the Association of Certified Public Accountants. The gap between the educational institutions and the professional bodies needs to be bridged. There is a lack of trained faculty and physical facilities. This results in the lack of trained accountants.

## X. Zimbabwe

### 1. Certification of accountants

89. The accounting certification is given by the Institute of Chartered Accountants of Zimbabwe. The certification is given based on specific written examinations. Three years' work experience is also required.

### 2. Main providers of education

90. The main providers are the University of Zimbabwe, the National University of Science and Technology and the Institute of Chartered Accountants. Ninety per cent of the instructors teach full time and 20 per cent have a professional accounting certification. They earn about 30 per cent of what is earned by accountants in the private sector. The lecture method is used. About 90 per cent of the accountants were educated in Zimbabwe.

### 3. Main deficiencies

91. The main deficiencies are the lack of a trained faculty, of adequate training materials, and of computers, and the large class-size. The supply of accountants is insufficient and this contributes to the lack of accountability in the public sector.

### Notes

1/ United Nations publication (Sales No. E.91.II.A.2).

Table 1. Certification of accountants

| Country | Certifying body | Joint certification | Basis for certification: Written examination Yes | Written examination No | Course-by-course examinations Yes | Course-by-course examinations No | Work experience Yes | Work experience No |
|---|---|---|---|---|---|---|---|---|
| Botswana | Botswana Institute of Accountants | Yes a/ | X | | | X | X | |
| Egypt | Syndicate of Commerce Record of Accountants in Ministry of Finance (MINFIN) | No | | X | | X | X | |
| Kenya | Registration of Accountants Board | No | X | | | X | | X |
| Lesotho | Lesotho Institute of Accountants | b/ | X | | X | | X | |
| Libyan Arab Jamahiriya | Certified Public Accountants and Auditors Union | No | X | | | X | X | |
| Madagascar | National Institute of Accounting Science and Administration of Enterprises University of Madagascar Higher Institute of Technology | No | X | | | X | X | |
| Morocco | Higher Institute of Commerce and Administration of Enterprises | No | X | | | X | X | |
| Nigeria | Institute of Chartered Accountants | No | X | | X | | X | |
| South Africa | South African Institute of Chartered Accountants Public Accountants and Auditors Board | No | X | | | X | X | |
| Swaziland | Swaziland Institute of Acountants | b/ | X | | X | | X | |

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| Country | Certifying body | Joint certification | Basis for certification: Written examination Yes | Written examination No | Course-by-course examinations Yes | Course-by-course examinations No | Work experience Yes | Work experience No |
|---|---|---|---|---|---|---|---|---|
| Tunisia | Institute of Higher Commercial Studies<br>Institute of Higher Accounting<br>Institute of Higher Management<br>Faculty of Economic Sciences and Management | No | X | | X | | X | |
| Zambia | Zambia Institute of Certified Accountants | Yes a/ | X | | | X | X | |
| Zimbabwe | Institute of Chartered Accountants | No | X | | X | | X | |

a/ With ACCA.

b/ Consisting in a joint examination agreement with ACCA, not a joint certification arrangement.

Table 2. Main education providers and their programmes, and proportion of accountants trained at home and abroad

| Country | Main institutions | Type of instruction: Classroom | Type of instruction: Correspondence | Government subsidization (Percentage) | Percentage share of fully qualified accountants trained: Abroad | Percentage share of fully qualified accountants trained: At home |
|---|---|---|---|---|---|---|
| Algeria | Faculty of Economic Science | X | | 75 | a/ | a/ |
| | Higher School of Commerce | X | | | | |
| | National Institute of Finance | X | | | | |
| | Centre for Professional Formation | X | | | | |
| Benin | Lycée Technique Coulibaly, CPC Porto Novo, CPC Ouidah, National School of Administration | X | | 100 | 100 | 0 |
| Botswana | Botswana Centre for Accounting Studies | X | | 50 | b/ | b/ |
| | Debswana Accountancy College | | | | | |
| Burkina Faso | Lycées techniques | X | | 70 | 60 | 40 |
| | Centre d'études de l'Immaculée Conception | X | | | | |
| | Lycée Promotion | X | | | | |
| | Lycée Leo-Lagrange | X | | | | |
| | University Institute of Technology INTEC (France) | | | | | |
| Central African Republic | Various lycées | X | | 15 | a/ | a/ |
| | National School of Administration | X | | | | |
| | National Chamber of Commerce | X | | | | |
| | University Institute of Management | X | | | | |
| Egypt | Universities of Cairo | X | | 100 | 0 | 100 |
| | Ein Shams, Asyoot, Alexandria, | X | | | | |
| | Canal, Zakazik, Mansoura, | X | | | | |
| | Mounofia, Menia | X | | | | |

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| Country | Main institutions | Type of instruction: Classroom | Type of instruction: Correspondence | Government subsidization (Percentage) | Percentage share of fully qualified accountants trained: Abroad | Percentage share of fully qualified accountants trained: At home |
|---|---|---|---|---|---|---|
| Gabon | Ecole de commerce<br>National Institute of Management Science<br>Lycées techniques | X | | 90 | 100 | 0 |
| Kenya | Strathmore School of Accounting<br>Kenyan College of Accountancy<br>School of Professional Studies<br>Harambe Technical College<br>Various polytechnics | X | X | 0 | 40 | 60 |
| Lesotho | Lesotho Institute of Accountants<br>Institute of Development Management<br>Lesotho Public Administration | X | X | 0 | 2 | 98 |
| Libyan Arab Jamahiriya | Faculties of commerce<br>Higher finance institutes | X | | 40 | 1 | 99 |
| Madagascar | INSCAE<br>University of Madagascar<br>Higher Institute of Technology | X | | 80 | 100 | 0 |
| Mali | Technical colleges<br>National School of Administration<br>Institute of Technology and Commerce | X | | 100 | 100 | 0 |
| Mauritania | Centre of Professional Formation<br>Technical Institute of Management (NAJAH)<br>Soumare Institute<br>Centre of Studies and Commercial Sciences<br>Various lycées and institutes | X | | 50 | 20 | 80 |

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| Country | Main institutions | Type of instruction: Classroom | Type of instruction: Correspondence | Government subsidization (Percentage) | Percentage share of fully qualified accountants trained: Abroad | Percentage share of fully qualified accountants trained: At home |
|---|---|---|---|---|---|---|
| Mauritius | University of Mauritius | X | | 0 | 100 | 0 |
| Morocco | Higher Institute of Commerce and Administration of Enterprises (ISCAE)<br>Ministry of Finance | X | | 90 | 0 | 100 |
| Nigeria | Major universities | X | | 0 | 30 | 70 |
| Rwanda | National University<br>Institute for Public Finance | X | | 80 | 20 | 80 |
| Senegal | Centre for African Management Studies<br>National School of Higher Technology<br>National School of Administration | X | | 80 | 80 | 20 |
| South Africa | University of South Africa and universities at Cape Town, Witwalbergland, Pretoria, Natal, Port Elizabeth, Western Cape | X | | 80 | 2 | 98 |
| Swaziland | University of Swaziland, Swaziland Institute of Management and Public Administration<br>Swaziland College of Technology | X | | 70 | 95 | 5 |
| Tunisia | Institute of Higher Commercial Studies<br>Institute of Higher Management<br>Institute of Higher Accounting<br>Faculty of Economic Sciences and Management | X | | 100 | 30 | 70 |

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| Country | Main institutions | Type of instruction: Classroom | Type of instruction: Correspondence | Government subsidization (Percentage) | Percentage share of fully qualified accountants trained: Abroad | Percentage share of fully qualified accountants trained: At home |
|---|---|---|---|---|---|---|
| Uganda | National College of Business Studies<br>Uganda Management Institute | X | | 0 | 100 | 0 |
| Zambia | Centre for Accountancy Studies<br>Zambia College<br>Chizola Accountancy Training College | X | | a/ | 100 | 0 |
| Zimbabwe | University of Zimbabwe<br>National University of Science and Technology<br>Institute of Chartered Accountants<br>Institute of Public Administration and Management | X | | 50 | 10 | 90 |

a/ Data unavailable.

b/ Figures not provided, with most training occurring at home.

Table 3. Teaching faculty: qualifications and remuneration
(Percentage)

| Country | Instructors | | Qualifications | | Salaries as proportion of those in private sector (business) | |
|---|---|---|---|---|---|---|
| | Full-time | Part-time | Ph.D. | Full certification | Teaching | Public sector (government) |
| Benin | 65 | 35 | 20 | 2 | 50 | 100 |
| Botswana | 95 | 5 | 0 | 100 | 90 | 100 |
| Burkina Faso | 45 | 55 | 7 | 0 | 15 | 15 |
| Central African Republic | 25 | 75 | 0 | 25 | 34 | 27 |
| Egypt | 100 | 0 | 100 | 100 | 125 | 100 |
| Gabon | 95 | 5 | a/ | 3 | 62 | 83 |
| Kenya | 60 | 40 | 10 | 30 | 35 | 47 |
| Lesotho | a/ | a/ | a/ | 85 | a/ | a/ |
| Libyan Arab Jamahiriya | 100 | 0 | 30 | a/ | 44 | 75 |
| Madagascar | 80 | 20 | 5 | 5 | 16 | 16 |
| Mali | 10 | 90 | a/ | 1 | 12 | 15 |
| Mauritania | 80 | 20 | 7 | 3 | 56 | 19 |
| Morocco | 70 | 30 | 30 | 60 | 40 | 24 |
| Nigeria | 90 | 10 | 20 | 65 | 40 | 33 |
| Rwanda | 70 | 30 | 10 | 10 | 50 | 40 |
| Senegal | 80 | 20 | 25 | 60 | 83 | 66 |
| South Africa | 90 | 10 | 15 | 75 | 44 | a/ |
| Swaziland | 90 | 10 | 0 | 0 | 34 | 25 |
| Tunisia | 70 | 30 | 100 | 0 | 58 | 66 |
| Uganda | 40 | 60 | 5 | 20 | 3 | 2 |
| Zambia | 100 | 0 | 0 | 0 | b/ | b/ |
| Zimbabwe | 90 | 10 | 0 | 20 | 30 | 46 |

a/ Data unavailable.

b/ Independent professional accountants set their own local salary, which is many times greater than that of an instructor in a government institution.

Table 4. Content of accounting education

| Country | Percentage share of each main component in degree programme | | | Types of accounting courses | | | Percentage contribution of each teaching method | | |
|---|---|---|---|---|---|---|---|---|---|
| | Liberal arts | Business and management | Accounting | Financial | Cost | Auditing | Lecture | Tutorial | Case |
| Algeria | a/ | a/ | a/ | X | X | X | 100 | 0 | 0 |
| Benin | 30 | 30 | 40 | X | X | X | 70 | 20 | 10 |
| Botswana | 33 | 34 | 33 | X | X | X | X | X | X |
| Burkina Faso | 5 | 10 | 75 | X | X | a/ | 70 | 10 | 20 |
| Central African Republic | 15 | 25 | 60 | X | X | a/ | 65 | 25 | 10 |
| Egypt | 25 | 25 | 50 | X | X | X | 75 | 0 | 25 |
| Gabon | 25 | 35 | 40 | X | X | X | 100 | 0 | 0 |
| Kenya | 20 | 40 | 40 | X | X | X | 60 | 30 | 10 |
| Lesotho | 20 | 20 | 60 | X | X | X | 55 | 40 | 5 |
| Libyan Arab Jamahiriya | 10 | 30 | 60 | X | X | X | 75 | 15 | 10 |
| Madagascar | 10 | 25 | 65 | X | X | X | 30 | 65 | 5 |
| Mali | a/ | a/ | a/ | X | X | a/ | 100 | 0 | 0 |
| Mauritania | 16 | 32 | 52 | X | X | X | 30 | 50 | 20 |
| Morocco | 20 | 30 | 50 | X | X | X | 40 | 30 | 30 |
| Nigeria | 0 | 40 | 60 | X | X | X | 100 | 0 | 0 |
| Rwanda | 20 | 30 | 50 | X | X | X | 70 | 10 | 20 |
| Senegal | 20 | 30 | 50 | X | X | X | 50 | 30 | 20 |
| South Africa | 10 | 20 | 70 | X | X | X | 65 | 25 | 10 |
| Swaziland | 10 | 35 | 55 | X | X | X | 100 | 0 | 0 |
| Tunisia | 15 | 35 | 55 | X | X | X | 100 | 0 | 0 |
| Uganda | 20 | 35 | 45 | X | X | X | b/ | b/ | b/ |
| Zambia | 0 | 53 | 46 | X | X | X | 100 | 0 | 0 |
| Zimbabwe | 5 | 20 | 75 | X | X | X | 75 | 20 | 5 |

a/ Data unavailable.

b/ Data incomplete.

Table 5. Main deficiencies in accounting education programmes

| Problem | Number of times problem was mentioned |
|---|---|
| Lack of preparation of students at entry level | 9 |
| Lack of trained faculty | 19 |
| Inappropriate curricula | 7 |
| Inappropriate textbooks | 18 |
| Lack of relevant teaching materials | 18 |
| Lack of physical facilities | 8 |
| Lack of computers | 12 |
| Large class-size | 7 |

Table 6. Contribution of accountants to national development

| Country | Quality of accountants | | Number of accountants | | Accountability | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Private sector | | Public sector | |
| | Adequate | Inadequate | Adequate | Inadequate | Adequate | Inadequate | Adequate | Inadequate |
| Algeria | | X | | X | | X | | X |
| Benin | | X | X | | X | | X | |
| Botswana | X | | | X | X | | X | |
| Burkina Faso | | X | | X | | X | | X |
| Central African Republic | | X | X | | X | | | X |
| Gabon | | X | X | | X | | | X |
| Kenya | X | | | X | X | | | X |
| Lesotho | | X | | X | | X | | X |
| Libyan Arab Jamahiriya | | X | | X | | X | | X |
| Madagascar | X | | X | | X | | | X |
| Mali | | X | | X | | X | | X |
| Mauritania | X | | | X | X | | | X |
| Mauritius | | X | X | | | X | | X |
| Morocco | | X | | X | | X | | X |
| Nigeria | X | | X | | X | | X | |
| Senegal | X | | X | | | X | | X |
| South Africa | X | | | X | X | | | X |
| Swaziland | | X | | X | X | | | X |
| Tunisia | X | | X | | X | | X | |
| Uganda | | X | | X | | X | | X |
| Zambia | X | | | X | X | | X | |
| Zimbabwe | X | | | X | X | | | X |

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Intergovernmental Working Group of Experts
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# ACCOUNTING EDUCATION AND STRENGTHENING OF THE PROFESSION: COMPARATIVE STUDY OF CURRICULA FOR ACCOUNTANTS AND AUDITORS IN AFRICA, ASIA, EUROPE, LATIN AMERICA AND NORTH AMERICA, INCLUDING PRE-QUALIFICATION AND CONTINUING EDUCATION PROGRAMMES IN PUBLIC AND PRIVATE INSTITUTIONS, AND EXAMINATION AND CERTIFICATION PROGRAMMES

## Regional review of accounting and auditing education and training in Asia and Latin America

## Report of the Secretary-General

SUMMARY

The present report summarizes the country responses, received from 12 Asian countries and 4 Latin American countries, to a questionnaire on the status of accounting education and training. The situation in Asia seems quite positive in that there is usually a formal certification process and most accountants are trained within their countries. The situation is quite different in Latin America where, in the countries studied, there is no certification process and there are serious deficiencies in the accounting education offered by universities.

* E/C.10/AC.3/1993/1.

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## INTRODUCTION

1. As part of the preparation for the eleventh session of the Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (ISAR), a questionnaire was designed and circulated to collect information on the state of accounting education and training at the national level. The objective of the survey was to determine the state or adequacy of accounting education world wide so that the Working Group could make recommendations for improvements in accounting education and for technical assistance projects to promote those improvements. The present report contains a summary of the 19 replies from Asia and the 4 replies from Latin America. The replies were not verified for their accuracy. Information will be corrected as necessary during the eleventh session of the Working Group and a revised version of the report published in International Accounting and Reporting Issues: 1993 Review.

2. Some details about the questionnaire and its circulation are necessary in order to properly understand and interpret the country replies. The questionnaire was circulated to all Governments by the Secretary-General through a note verbale. It was also sent to a number of leading academics in accounting, as well as to the heads of professional bodies. The questionnaire was divided into three parts:

I. Profile of education

II. Assessment of the role of accounting education

III. Future direction of accounting

3. The first part contained questions of fact, that is, questions covering the actual situation regarding the certification process, educational requirements and educational infrastructure. In the second and third parts, a series of questions were asked on the role and future direction of accounting education. They were therefore subjective in nature and could have more than one answer, depending on who replied. Consequently, it is advisable to keep in mind the subjective nature of those questions when reading the country replies. Lastly, it is important to state that the country replies in section II are just that - country replies - and not expressions of the opinion of the United Nations.

## I. GENERAL CONCLUSIONS BASED ON NATIONAL RESPONSES

4. Before each country's reply is described in detail, an analysis of the various groups of questions will be made in order to provide an overview of the situation.

### A. Asia

5. In a number of cases, certification is carried out by a government agency rather than by a professional body. In almost all cases, however, a written examination and practical experience are required. In only three countries were the majority of accountants trained abroad. In many countries academic accountants earn at least half of what is earned by accountants in the private sector but in Japan they earn more. The typical accounting programme stresses both business and accounting subjects but the case method is seldom used. The two most frequently mentioned deficiencies were lack of relevant training materials and large class-size. Despite these problems, the quality of accountants was not cited as a problem and the general opinion was that there was accountability in both the private and public sectors. However, the lack of independence of the profession was mentioned. These conclusions are reflected in tables 1-6.

### B. Latin America

6. While only four countries, Brazil, Chile, Peru and Panama, responded to the questionnaire, the information they presented was remarkably uniform. There is no formal certification process based on written examinations and practice experience in any of the countries. Accounting diplomas are given by all the major universities but most of the faculty are part time and poorly paid and do not have adequate curricula or training materials. This has had a negative impact on the quality of accountants (see tables 3, 5 and 6).

## II. NATIONAL RESPONSES

### A. Asia

#### 1. Australia

(a) Certification of accountants

7. The title of accountant is not registerable in Australia. This means that any person can in fact describe him- or herself as an accountant. However, the performing of certain tasks requires registration. Such registration is handled by the Department of Technical and Further Education (TAFE), the National Institute of Accountants (NIA), the Australian Society of Certified Practising Accountants (ASCPA), the Institute of Chartered Accountants in Australia (ICAA) and the Australian Securities Commission (ASC). Such registration is directly linked to formal education, membership in professional bodies and experience. Written examinations are required on a course-by-course basis and there is a three years experience requirement.

(b) Main providers of accounting education and their programmes

8. The main providers of accounting education are universities, TAFE, ASCPA and ICAA. Eighty per cent of the instructors are full time; 10 per cent have Doctor of Philosophy degrees (Ph.D.'s) and 2 per cent a professional accounting certification. Accounting instructors earn about half of what is earned by accountants in the private sector. Accounting subjects constitute 60 per cent of the courses in the typical accounting degree programme. The lecture method, the tutorial method and the case method are all used equally. Students pay $2,000 per annum and the Government finances the balance of their education costs.

(c) Main deficiencies in accounting education

9. The main deficiencies are inadequate government funding relative to other faculties, large class-size, lack of computers and inadequate curricula. Accounting education is highly technical and there is a desire to have more broad-based tertiary degrees. The enormous increase in the amount of technical knowledge required of professional accountants has tended to squeeze some important areas out of the current degree programmes. Accounting degree programmes are limited to three years duration because the Government refuses to pay for a fourth year. If there were a fourth year more broad-based subjects could be taught.

## 2. China

(a) Certification of accountants

10. The certification of accountants is carried out by the Ministry of Finance based on written examinations that are comprehensive in nature and cover accounting, auditing, financial management and economic law. Work experience of more than three years duration is also required.

(b) Main providers of accounting education and their programmes

11. Many universities and institutes provide accounting education, including Shanghai University of Finance and Economics, Tianjin Institute of Finance and Economics, Northeast University of Finance and Economics, the Central Institute of Finance and Economics, the Tiangxi Institute of Finance and Economics, the Central South University of Finance and Economics, the People's University of China and the Shanghai Lixin Accounting School. Ninety per cent of the instructors teach full time, about 15 per cent have Ph.D.'s and 20 per cent have professional accounting certifications. Accounting courses constitute about 35 per cent of the courses in the typical accounting degree programme. The lecture method is largely used. The Government provides a subsidy of 60 per cent.

(c) Main deficiencies in accounting education

12. The main deficiencies are the lack of trained faculty, and of computers, and large class-size. This results in a lack of independence in the accounting profession. The State Education Commission and Ministry of Finance are planning to change accounting education so that it can meet the needs of a market-oriented socialist economy.

## 3. Cyprus

(a) Certification of accountants

13. Certification as an independent auditor is awarded by the Institute of Certified Public Accountants of Cyprus.

(b) Main providers of accounting education and their programmes

14. A number of private colleges offer accounting diplomas. Half the instructors teach full time and 90 per cent have a professional accounting certification. They earn about 80 per cent of what is earned by accountants in the private sector. Accounting courses constitute about 60 per cent of the typical degree programme. The lecture method and the tutorial method are used. There is no government subsidy for accounting education.

(c) Main deficiencies in accounting education

15. The main deficiencies are the lack of physical facilities and computers, as well as of relevant training materials. Accounting education is not contributing to the development of an independent accounting profession.

## 4. Israel

(a) Certification of accountants

16. The Auditors Council (Ministry of Justice) licenses certified public accountants based on written examinations that are given on a course-by-course basis. There is a two years experience requirement.

(b) Main providers of accounting education and their programmes

17. The main providers of accounting education are Hebrew University (Jerusalem), Bar-Ilan University, Tel Aviv University, Tel Aviv Business College, Haifa University and Be'ér Sheva University. Half the instructors teach full time. All have Ph.D.'s and 20-30 per cent have a professional accounting certification. They earn about half of what is earned by an accountant in the private sector. Accounting courses constitute about half of the typical accounting degree programme. The lecture method is mainly used. Higher education is heavily subsidized by the Government (60-70 per cent of total operating expenditure).

(c) Main deficiencies in accounting education

18. Israel shares with other small countries the problem of its being uneconomic to publish small editions (in this case, in Hebrew) of international accounting literature. For any in-depth study, a sound command of English is required, and it is difficult for a Hebrew-speaking student to acquire such a skill.

## 5. Japan

(a) Certification of accountants

19. In Japan, the Ministry of Finance grants certification. It is based on two stages of written examinations that are comprehensive in nature and given by the Certified Public Accountant (CPA) Examination Committee of the Ministry of Finance. There is a three years experience requirement.

(b) Main providers of accounting education and their programmes

20. Numerous universities offer courses in accounting but there is no accounting degree programme. Eighty per cent of the instructors teach full time. Thirty per cent have Ph.D.'s and 10 per cent have professional accounting certifications. They earn more than accountants in the public and private sectors. Accounting courses constitute 30 per cent of a typical degree programme. The lecture method is used.

(c) Main deficiencies in accounting education

21. The main deficiencies are large class-size, the lack of relevant teaching materials, inadequate curricula and the lack of trained faculty. What is lacking in university education in Japan is training in solving problems by using the case method. It is felt that rather than concentration on offering courses that will produce accounting technicians, there should be more weight given to proper and effective use and interpretation of accounting and business information for planning and decision-making purposes.

## 6. Jordan

(a) Certification of accountants

22. The Jordanian Association of Certified Public Accountants and the Audit Profession Board award certification. It is based on a comprehensive written examination. There is a practical experience requirement. The Arab Society of Certified Accountants also provides certification.

(b) Main providers of accounting education and their programmes

23. The main providers of education are Jordan University, Yarmouk University, Mounta University and the Arab Society of Certified Accountants.

Ninety per cent of the instructors teach full time. Seventy per cent have Ph.D.'s and 10 per cent have professional accounting certifications. They earn less than half of what is earned by accountants in the private sector. Accounting courses constitute 40 per cent of the typical accounting degree programme. The lecture method predominates. The Government provides a subsidy of 60 per cent.

(c) Main deficiencies in accounting education

24. The main deficiencies are lack of trained faculty, of practical training materials and of computers, and large class-size. This has adversely affected the quality of accountants, the development of an independent profession and accountability in the public sector. In addition the law does not require a professional qualification for practising the accounting profession.

## 7. Republic of Korea

(a) Certification of accountants

25. Accountants are certified by the Ministry of Finance. Certification is based on a comprehensive written examination. There is an experience requirement.

(b) Main providers of accounting education and their programmes

26. Many universities are the main providers of education, along with the Accounting Training School of the Korean Institute of Certified Public Accountants. Eighty per cent of the instructors teach full time. Almost all have doctorates and 20 per cent have a professional accounting certification. Instructors earn about 60 per cent of what is earned by accountants in the private sector. Accounting courses constitute 40 per cent of the typical accounting degree programme. The lecture method predominates. There are no government subsidies.

(c) Main deficiencies in accounting education

27. The main deficiencies in accounting education are the lack of physical facilities and computers, of well-prepared students at entry level and of relevant training materials.

## 8. Malaysia

(a) Certification of accountants

28. Certification is given by the Malaysian Association of Certified Public Accountants and the Malaysian Institute of Accountants. To be an independent auditor a person must possess a professional qualification recognized in the

Malaysian Accountants Act and pass an interview conducted by the Treasury, Ministry of Finance. Certification is based on written examinations taken on a course-by-course basis. There is an experience requirement.

(b) Main providers of accounting education and their programmes

29. The main providers of accounting education are universities and institutes as well as the Malaysian Association of Certified Public Accountants. The lecture method is used.

(c) Main deficiencies in accounting education

30. The main deficiencies are the lack of trained faculty, large class-size, and lack of physical facilities and of adequate training material. There is an inadequate supply of accountants in Malaysia.

31. Malaysia is working towards achieving the rank of a developed nation by the year 2020. The Government, in its framework for growth, recognizes the importance of human resource development. It also recognizes that a high standard of accountancy training and education can assist in creating a productive and efficient workplace with the financial and managerial skills needed to build and sustain the economy.

## 9. Pakistan

(a) Certification of accountants

32. The Institute of Chartered Accountants awards certification based on a comprehensive written examination. There is also an experience requirement. The Institute of Cost and Management Accountants also awards certification but does not permit the recipient to carry out an audit.

(b) Main providers of accounting education and their programmes

33. The main providers of education are the major universities. All instructors work full time. They earn about 37 per cent of what is earned by the accountants in the private sector. Accounting courses constitute 75 per cent of the typical accounting programme. The lecture and tutorial methods are used equally. There are no government subsidies.

(c) Main deficiencies in accounting education

34. The main deficiencies are the lack of well-prepared students at entry level, of trained faculty and of practical training materials, and large class-size.

## 10. Singapore

### (a) Certification of accountants

35. Certification of accountants is conferred by the Public Accountants Board. The recognition is accorded to Bacherlor of Accounting (B.Acc.) graduates of the School of Accountancy and Business at Nanyang Technological University. There is an experience requirement.

### (b) Main providers of accounting education and their programmes

36. The main providers are Nanyang Technological University. Eighty-five per cent of the instructors teach full time, 42 per cent have doctorates and 35 per cent have professional accounting certifications. They earn about 90 per cent of what is earned by accountants in the private sector. The Government finances 80 per cent of the education. Accounting courses constitute 32 per cent of the typical accounting degree programme. The lecture and the tutorial method are used.

### (c) Main deficiencies in accounting education

37. The main deficiencies are the lack of physical facilities, large class-size and the lack of appropriate textbooks.

## 11. Thailand

### (a) Certification of accountants

38. Certification is carried out by the Board of Supervision of Auditing Practice, Ministry of Commerce. It is based on a comprehensive written examination. There is a practice requirement.

### (b) Main providers of accounting education and their programmes

39. A number of universities provide accounting education. Eighty per cent of their instructors teach full time. About 1 per cent have Ph.D.'s in accounting and 10 per cent have a professional accounting certification. Instructors earn 15 per cent of what is earned by accountants in the private sector. Accounting courses constitute half of the typical accounting degree programme. The lecture method predominates. There are no government subsidies.

### (c) Main deficiencies in accounting education

40. The main deficiencies are the lack of appropriate training materials and textbooks, of trained faculty and of appropriate curricula. Class-size is also too large. This leads to an inadequate number of accountants, and the lack of an independent profession and of accountability in the public and private sectors.

### 12. Tonga

(a) Certification of accountants

41. Certification is awarded by the Tonga Society of Accountants and no special right is conferred by the Government. There is no examination or practice requirement. The Tonga Society of Accountants is still in its infancy. Members comprise a few nationals plus expatriates who acquired their qualifications abroad.

(b) Main providers of accounting education and their programmes

42. The Ministry of Education, the main provider of accounting education, has introduced a certificate course in accounting studies. Recently, it introduced a diploma course. The main aim is to cater for the accounting technician needs of the country.

## B. Latin America

### 1. Brazil

(a) Certification of accountants

43. The Regional Accounting Boards award professional practice licences. No examination is given by the Regional Boards. Accounting diplomas are given by the accounting faculties of Brazilian universities.

(b) Main providers of accounting education and their programmes

44. The main providers of accounting education are the universities of São Paulo, Minas Gerais, Rio de Janeiro, Rio Grande do Sul, Fortaleza, Brasília and Bahia as well as the Faculty of Economic Science of São Paulo and the Catholic universities at São Paulo and Minas Gerais. About 25 per cent of the staff teaches full time. Eight per cent have doctorates and 90 per cent have a professional accounting certification. They earn 58 per cent of what is earned by accountants in the private sector. Accounting courses constitute 45 per cent of the degree programme. The lecture method predominates. Fifteen per cent of the education is financed by the Government.

(c) Main deficiencies in accounting education

45. The main deficiencies are the lack of well-prepared entry-level students, of trained professors, of computers and of appropriate curricula. This affects adversely the quality of accountants and the independence of the profession.

## 2. Chile

### (a) Certification of accountants

46. There is no certification process in Chile. Accounting diplomas are given by the universities and professional institutes, and the market discriminates according to an accountant's knowledge and capacity.

### (b) Main providers of accounting education and their programmes

47. The main providers of accounting education are the universities at Santiago, Valparaíso (Catolica), del Norte, Austral and Diego Portales, and the School of Accountants and Auditors of Santiago. Twenty per cent of the instructors teach full time. None have doctorates or professional accounting certifications. They earn 46 per cent of what is earned by accountants in the private sector. Accounting courses constitute half of the degree programme. The lecture method predominates. There are no government subsidies for accounting education.

### (c) Main deficiencies in accounting education

48. The main deficiencies are the lack of trained faculty, of appropriate curricula and of training materials. Class-size is also very large. A system of professional accreditation would help the community to better appreciate the profession.

## 3. Peru

### (a) Certification of accountants

49. According to information received, the universities confer the designation of accountant based on both general and specific examinations. There is also a practical experience requirement.

### (b) Main providers of accounting education and their programmes

50. The main providers of accounting education are the following universities: Lima, El Pacifico, Catolica, Mayor de San Marcos, Ricardo Palma, Federico Villarreal and Inca Garcilazo de la Vega, Nacional de Trujillo, Nacional San Agustin and Tecnica del Callao. Thirty per cent of the instructors teach full time. About 10 per cent have doctorates and 90 per cent have professional accounting certifications. Instructors earn about 7,5 per cent of what is earned by accountants in the private sector. The lecture method is used. The Government provides a subsidy of 50 per cent.

### (c) Main deficiencies in accounting education

51. The main deficiencies are the lack of appropriate curricula and of physical facilities, and large class-size.

## 4. Panama

### (a) Certification of accountants

52. An accounting licence is awarded by the Ministry of Commerce and Industry with the help of the Technical Accounting Committee. It is restricted to citizens. No examinations are given.

### (b) Main providers of accounting education and their programmes

53. The main providers of accounting education are the following universities: Panama, Santa Maria la Antigua, del Istmo, Latinoamericano de Ciencias y Tecnología and Latina de Costa Rica. Thirty per cent of the instructors teach full time. All have a professional accounting certification. They earn 60 per cent of what is earned by accountants in the private sector. Accounting courses constitute 35 per cent of the degree programme. The lecture method is used exclusively. The majority of accounting students are enrolled at the University of Panama, which has a 90 per cent subsidy.

### (c) Main deficiencies in accounting education

54. The main deficiencies are the lack of well-prepared students, of appropriate training materials and textbooks, and of trained faculty and appropriate curricula. This has adversely affected the quality of accountants and led to a lack of accountability in the public sector.

Table 1. Certification of accountants

| Country | Certifying body | Joint certification | Basis for certification: Written exam Yes | Written exam No | Course-by-course examinations Yes | Course-by-course examinations No | Work experience Yes | Work experience No |
|---|---|---|---|---|---|---|---|---|
| Australia | Department of Technical and Further Information<br>National Institute of Accountants<br>Australian Society of Certified Practising Accountants<br>Institute of Chartered Accountants<br>Australian Securities Commission | No | X | | X | | X | |
| China | Ministry of Finance | No | X | | X | | X | |
| Cyprus | Institute of Certified Public Accountants | No | | X | a/ | a/ | a/ | a/ |
| Israel | Auditors Council | No | X | | X | | X | |
| Japan | Ministry of Finance | No | X | | | X | X | |
| Jordan | Association of Certified Public Accountants | No | X | | | X | X | |
| | Arab Society of Certified Accountants | a/ | X | | | X | X | |
| | Audit Profession Board | | X | | | | | |
| Korea, Republic of | Ministry of Finance | No | X | | | X | X | |
| Malaysia | Malaysia Association of Certified Public Accountants<br>Malaysia Institute of Accountants<br>Association of Certified Public Accountants<br>Ministry of Finance | No | X | | X | | X | |
| Pakistan | Institute of Chartered Accountants | No | X | | | X | X | |
| Singapore | Public Accountants Board | No | X | | X | | X | |
| Thailand | Board of Supervision of Auditing Practice | No | X | | | X | X | |

a/ Data unavailable.

Table 2. Main education providers and their programmes, and proportion of accountants trained abroad

| Country | Main institutions | Type of instruction | | Government subsidization (percentage) | Proportion of accountants trained abroad (percentage) |
|---|---|---|---|---|---|
| | | Classroom | Correspondence | | |
| Australia | Department of Technical and Further Education, Australian Society of Certified Practising Accountants Institute of Chartered Accountants in Australia | X | X | a/ | 5-10 |
| China | Universities and institututes, Shanghai University of Finance and Economics; Tianjin Institute of Finance and Economics; Central Institute of Finance and Economics; Tiangxi Institute of Finance and Economics; Central South University of Finance and Economics; People's University of China; and Shanghai Lixing Accounting School; Beijing Lixing Accounting School; and Zhanghun Accounting Correspondence School | X | | 60 | 1.5 |
| Cyprus | Private colleges | X | | 0 | 90 |
| Israel | Universities: Hebrew, Bar-Ilan, Tel Aviv, Haifa and Be'er Sheva | X | | 60-70 | 10 |
| Japan | Universities: Hitotsubashi Kobe, Waseda Keio, Chuo Meiji, Tokyo Kansai, Kwansei-Gakuin, Nagoya | X | | 0 | 5 |
| Jordan | Universities: Jordan, Yarmouk and Mounta, and Arab Society of Certified Accountants | X | | 60 | 10 |
| Korea, Republic of | Universities: Seoul National Yeon Se Korea, Han Yang Sung Gyan Geon, Chung Ang, Pusan, Gyung Wee, Dong Kook, Chung Nam | X | | 0 | 5 |
| Malaysia | Association of Certified Public Accountants; Universities: Malaysia National Agricultural Northern, Mara Institute of Technology, Institute of Cooperative Auditors, Ungku Omar, Tuanku Abdul Rahman College | X | | b/ | 77 |
| Pakistan | Universities: Punjab, Karachi, Sindh, Peshawar, Baluchistan, Comal, Bahauddin Zikriya, Allama Iqbal Open, Quaid-E-Azam, Azad Kashmir | X | | 0 | 10 |

Table 2 (continued)

| Country | Main institutions | Type of instruction: Classroom | Type of instruction: Correspondence | Government subsidization (percentage) | Proportion of accountants trained abroad (percentage) |
|---|---|---|---|---|---|
| Singapore | Nanyang Technical University, Singapore Polytechnic; Nee Aun Polytechnic, Temaseh Polytechnic | X | | 80 | 10 |
| Thailand | Universities: Chulalong-korn, Thammasat, Ramkumheng, Kasetsart, Songklanaka-rin, Konkaen, Chiangmai, Bangkok, Thurakitbundit, and Assumption Business Administration College | X | | 0 | 0 |
| Tonga | Ministry of Education | c/ | c/ | c/ | 100 |
| Brazil | Universities: Sao Paulo, Minas Gerais, Rio de Janeiro, Rio Grande do Sul, Forteleza, Brasilia, Bahia; Catolica in Sao Paulo and in Minas Gerais; Faculty of Economic Science in Sao Paulo | X | | 15 | - |
| Chile | Universities: Chile, Catolica en Valparaiso, del Norte, Austral, Diego Portales, School of Accountants and Auditors of Santiago | X | | 0 | 0 |
| Panama | University of Panama | X | | 90 | 0 |
| Peru | Universities: Lima, El Pacifico, Catolica, San Marcos, Ricardo Palma, Federico Villareal, Inca Garcelazo de la Vega, Nacional San Agustin, Tecnica del Callao | X | | 50 | 10 |

a/ Students pay $2,000 per annum towards education costs, the Government then financing the balance.

b/ Subsidies for university students, not for those undertaking professional courses.

c/ Data unavailable.

Table 3. Teaching faculty: qualifications and remuneration (percentage)

| Country | Instructors | | | | Salaries as proportion of those in private sector (business) | |
|---|---|---|---|---|---|---|
| | Full-time | Part-time | Ph.D. | Full certification | Teaching | Public sector (Government) |
| Australia | 80 | 20 | 10 | 2 | 50 | a/ |
| China | 90 | 10 | 15 | 20 | a/ | a/ |
| Cyprus | 50 | 50 | 10 | 90 | 82 | 92 |
| Israel | 50 | 50 | 100 | 20-30 | 53 | a/ |
| Japan | 80 | 20 | 30 | 10 | 110 | 82 |
| Jordan | 90 | 10 | 70 | 10 | 40 | 75 |
| Korea, Republic of | 80 | 20 | 99 | 20 | 60 | a/ |
| Malaysia | 80 | 15 | 10 | 0 | 57 | 25 |
| Pakistan | 100 | 0 | a/ | a/ | 37 | a/ |
| Singapore | 85 | 15 | 42 | 35 | 90 | a/ |
| Thailand | 80 | 20 | 1 | 10 | 15 | 15 |
| Brazil | 25 | 75 | 8 | 90 | 58 | 40 |
| Chile | 20 | 80 | 0 | 0 | 46 | 42 |
| Panama | 30 | 70 | 0 | 100 | 60 | 50 |
| Peru | 30 | 70 | 10 | 90 | 75 | 50 |

a/ Data unavailable.

Table 4. Content of accounting education

| County | Percentage share of each component in accounting degree programme | | | Types of accounting courses | | | Percentage contribution of each teaching method | | |
|---|---|---|---|---|---|---|---|---|---|
| | Liberal arts | Business and management | Accounting | Financial | Cost | Auditing | Lecture | Tutorial | Case |
| Australia | 10 | 30 | 60 | X | X | X | a/ | a/ | a/ |
| China | 20 | 45 | 35 | X | X | X | 80 | 10 | 10 |
| Cyprus | 10 | 30 | 60 | X | X | X | 80 | 20 | 0 |
| Israel | 5 | 45 | 50 | X | X | X | 80 | 10 | 10 |
| Japan | 30 | 40 | 30 | X | X | X | 85 | 10 | 5 |
| Jordan | 20 | 40 | 40 | X | X | X | 70 | 25 | 5 |
| Korea, Republic of | 20 | 40 | 40 | X | X | X | 90 | 0 | 10 |
| Malaysia | 23 | 35 | 42 | X | X | X | a/ | a/ | a/ |
| Pakistan | 0 | 25 | 75 | X | X | X | 50 | 50 | 0 |
| Singapore | 8 | 60 | 32 | X | X | X | 40 | 40 | 20 |
| Thailand | 15 | 35 | 50 | X | X | X | 60 | 10 | 30 |
| Brazil | 20 | 35 | 45 | X | X | X | 80 | 15 | 5 |
| Chile | 10 | 40 | 50 | X | X | X | 80 | 15 | 5 |
| Panama | 24 | 41 | 35 | X | X | X | 100 | 0 | 0 |
| Peru | 20 | 20 | 60 | X | X | X | 50 | 20 | 30 |

a/ Equal usage of all three methods.

Table 5. Main deficiencies in accounting education programmes

| Problem | Number of times problem was mentioned in | |
|---|---|---|
| | Asia | Latin America |
| Lack of preparation of students at entry level | 3 | 3 |
| Lack of trained faculty | 8 | 2 |
| Inappropriate curricula | 3 | 3 |
| Inappropriate textbooks | | 2 |
| Lack of relevant teaching materials | 9 | a/ |
| Lack of physical facilities | 7 | 2 |
| Lack of computers | 7 | 1 |
| Large class-size | 9 | 3 |
| Lack of government funding | 2 | a/ |
| Language difficulties | 1 | a/ |
| No legal requirement for certification | 1 | a/ |

a/ Data not provided.

Table 6. Contribution of accountants to national development

| Country | Quality accountants | | Number of accountants | | Accountability | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | Private sector | | Public sector | |
| | Adequate | Inadequate | Adequate | Inadequate | Adequate | Inadequate | Adequate | Inadequate |
| Australia | X | | X | | X | | X | |
| China | X | | X | | X | | X | |
| Cyprus | X | | X | | X | | X | |
| Israel | X | | X | | X | | X | |
| Japan | X | | X | | X | | X | |
| Jordan | X | | X | | X | | X | |
| Korea, Republic of | X | | X | | X | | X | |
| Malaysia | X | | | X | X | | X | |
| Pakistan | X | | X | | X | | X | |
| Singapore | X | | X | | X | | X | |
| Thailand | X | | | X | | X | | X |
| Tonga | X | | X | | a/ | a/ | a/ | a/ |
| Brazil | | X | X | | X | | X | |
| Chile | X | | X | | X | | X | |
| Panama | | X | X | | X | | | X |
| Peru | | X | X | | X | | X | |

a/ Data unavailable.

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